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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,309	07/23/2003	Luis A. Diaz	60,210-189	8382

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EXAMINER

HORN, ROBERT WAYNE

ART UNIT PAPER NUMBER

2837

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,309

Applicant(s)

DIAZ ET AL.

Examiner

Robert W. Horn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 108 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 108 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date (7/23/03) 9/27/03 & 04, but 27, 03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The examiner acknowledges a preliminary amendment, wherein claims 1-107 and 109-116 have been canceled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 108 rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al. (U.S. Patent 5,887,281) and Bertone (U.S. Patent 4,241,299).

Regarding claim 108, Green et al. teaches the underlying structure the of the air filtration system including a helmet assembly adapted to be mounted on a head of a user and a gown for covering the helmet assembly, wherein the helmet assembly of the air filtration system includes a fan, motor, and power supply (fan and filtration system,

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power supply, abstract, column 1, gown, line 47, motor, column 10, line 17), and the control of airflow. Green et al. does not teach the particulars of the method for maintaining a constant volume of air flowing into the air filtration system.

Bertone teaches the essentials of the method for maintaining a constant volume of air flowing into an air filtration system during the entire use of the air filtration system, said method comprising the steps of:

selectively activating and deactivating the power supply at a first activation rate to distribute a required voltage to the motor thereby establishing a rotational speed for the fan that correlates to the constant volume of air flowing into the air-filtration system (column 1, lines 25-30);

monitoring the back electromotive force of the motor of the helmet assembly to determine the rotational speed of the fan and when the rotational speed of the fan [pump] has stabilized for a predetermined period of time (column 2, lines 19-24);

monitoring the voltage of the power supply after the rotational speed of the fan [pump] has stabilized for the predetermined period of time (column 2, lines 34-37); and

selectively activating and deactivating the power supply at a second activation rate as the monitored voltage of the power supply decreases thereby sustaining the required voltage being distributed to the motor such that the constant volume of air flowing into the air filtration system is maintained (column 2, lines 28-34 in relation to varying the motor speed such that it corresponds to speed adjustment set-point).

Bertone teaches the incorporation of a speed control for minimizing speed fluctuations due to varying loads and/or changing battery voltage (column 1, lines 16-19).

Green et al. and Bertone teach solutions regarding airflow and the filtration of air and therefore teach in the same problem solving area. Green et al. teaches the air filtration of the air for the wearer of the headgear, while Bertone teaches the air filtration for detecting contaminants in the air. A person of ordinary skill in the art of controlling air filtration driving by air flow inducing device would be knowledgeable of various means for controlling the flow of the air via the control of the speed of the motor.

Considering the objective evidence, it would have been obvious to someone of ordinary skill in the art of motor control to combine the method for controlling the speed of the motor to closely regulate the flow of air into the filtration system, taught by Bertone, with the air filtration system including a helmet assembly adapted to be mounted on a head of a user and a gown for covering the helmet assembly, wherein the helmet assembly of the air filtration system includes a fan, motor, and power supply, taught by Green et al., in order control the flow of air by minimizing speed fluctuations due to varying loads and or changing battery voltage, taught by Bertone.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to the not cited references cited on the form 892.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Horn whose telephone number is 571-272-8591. The examiner can normally be reached on Monday-Friday 7:00-3:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln D. Donovan can be reached on 571-272-2800, ext 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

rwh
May 16, 2006


LINCOLN DONOVAN
PRIMARY EXAMINER
GROUP 2100